Kansas Public Health Association
Kansas Update: Public Health and Health Information Exchange
September 17, 2015

Michael McPherson
Project Manager/ Meaningful Use Coordinator
Office of Health Information Technology
Kansas Department of Health & Environment
Objectives

- Review
- Interoperability and Public Health Data
- Review Kansas Health Information Exchange (HIE) Environment
Quick Review

- How did we get here?
- What was going on at the national level?
- How did Kansas participate?
What is Meaningful Use

- Financial incentive through use of certified EHR to:
  - Improve quality, safety, efficiency
  - Reduce health disparities
  - Reduction medical errors
  - Engage patients and family
  - Improve care coordination
  - Improve population health and public health

To protect the health and environment of all Kansans by promoting responsible choices.
To protect the health and environment of all Kansans by promoting responsible choices.

Achieving Meaningful Use

HI-TECH Policies

2009

Phase 1
(Capture/share data)

2011

Phase 2
(Advanced care processes with decision support)

2014

2016

Phase 3
(Improved Outcomes)
To protect the health and environment of all Kansans by promoting responsible choices.
To protect the health and environment of all Kansans by promoting responsible choices.

## KS (Big Changes in Two Years)

<table>
<thead>
<tr>
<th>2013</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Meaningful use incentivizing EHR use</td>
<td>- Meaningful use still incentivizing EHR use</td>
</tr>
<tr>
<td>- Kansas HIOs &lt; 1 year of exchange</td>
<td>- Impacts collection of certain public health data</td>
</tr>
<tr>
<td>- Potential wealth of data</td>
<td>- HIO participation has increased dramatically</td>
</tr>
<tr>
<td>- KDHE working with HIOs and partners</td>
<td>- &quot;Potential wealth of data&quot;</td>
</tr>
<tr>
<td>- Workgroup devoted to identifying data uses</td>
<td>- Still true, but …..</td>
</tr>
</tbody>
</table>


Interoperability
What is Interoperability?

In healthcare, interoperability is the ability of different information technology systems and software applications to communicate, exchange data, and use the information that has been exchanged.
Interoperability via Communication

In healthcare, interoperability is the ability of different information technology systems and software applications to communicate, exchange data, and use the information that has been exchanged.
Data Interoperability

In healthcare, interoperability is the ability of different information technology systems and software applications to communicate, exchange data, and use the information that has been exchanged.

```plaintext
OBX|1|NM| ^Diastolic Blood Pressure^L||88|||||||||20140627082153
OBX|2|NM| ^Systolic Blood Pressure^L||131|||||||||20140627082153
```
Semantic Interoperability?

In healthcare, interoperability is the ability of different information technology systems and software applications to communicate, exchange data, and use the information that has been exchanged.
Data-centered vs. Document Centered

- **Data-centered**: (e.g., X12 or HL7 messages) traditional structures to represent the data being transported (a row in a file for a record; delimited or fixed length fields within the record) which goes into a database.

- **Document-centered**: (e.g., CCR, CCD) electronic document where data is pre-arranged in a structured format which is “filed”.

To protect the health and environment of all Kansans by promoting responsible choices.
Interoperability at the National-Level*

- 2014: 96.9% hospitals had a certified EHR
- 2014: 76% hospitals able to exchange “data” with outside ambulatory care providers
- 48% are able to find health data from outside sources

* ONC Health IT Policy Committee meeting 8/11/2015
To protect the health and environment of all Kansans by promoting responsible choices.

Technical Barriers to Interoperability

- Exchange partners lacking EHRs to receive data: 59%
- Exchange partners' EHR systems lack data reception capabilities: 58%
- Difficultly finding provider address: 45%
- Difficulty matching or identifying patients: 24%
- Lacking capability to electronically receive data from outside sources: 16%
- Lacking capability to electronically send data to outside sources: 10%
Operational Barriers to Interoperability

- Cumbersome workflow issues: 30%
- Summary of care record sent not useful: 26%
- Not sharing data with outside providers: 10%
- 25% of hospitals report additional costs of exchanging data with outside providers as a financial barrier
Kansas HIO Interoperability

To protect the health and environment of all Kansans by promoting responsible choices.
Kansas HIIOs

- Kansas Health Information Network (KHIN)
- Technology Vendor: Informatics Corporation of America (ICA)
  - http://www.khinonline.org/
  - Live since 8/2012

- Lewis and Clark Information Exchange (LACIE)
- Technology Vendor: Cerner
  - http://www.lacie-hie.com/
  - Live since 5/2013
To protect the health and environment of all Kansans by promoting responsible choices.
Kansas Meaningful Use Medicare Attestations

thru 6/30/2015

<table>
<thead>
<tr>
<th>Year</th>
<th>Hospital - Stage 2</th>
<th>Hospital - Stage 1</th>
<th>EP - Stage 2</th>
<th>EP - Stage 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>2011</td>
<td></td>
<td>74</td>
<td></td>
<td>308</td>
</tr>
<tr>
<td>2012</td>
<td></td>
<td>174</td>
<td></td>
<td>1188</td>
</tr>
<tr>
<td>2013</td>
<td></td>
<td></td>
<td></td>
<td>1565</td>
</tr>
<tr>
<td>2014</td>
<td>192</td>
<td></td>
<td>314</td>
<td></td>
</tr>
<tr>
<td>2015</td>
<td></td>
<td>8</td>
<td>464</td>
<td>3304</td>
</tr>
</tbody>
</table>

Source: http://www.healthit.gov/sites/default/files/mu_report.xlsx

To protect the health and environment of all Kansans by promoting responsible choices.
51% of Kansas office-based physicians have demonstrated meaningful use through Medicare.

To protect the health and environment of all Kansans by promoting responsible choices.

Kansas Meaningful Use Medicaid Attestations thru 8/23/2015

<table>
<thead>
<tr>
<th>Year</th>
<th>EP</th>
<th>EH</th>
</tr>
</thead>
<tbody>
<tr>
<td>2011</td>
<td>285</td>
<td>24</td>
</tr>
<tr>
<td>2012</td>
<td>437</td>
<td>30</td>
</tr>
<tr>
<td>2013</td>
<td>450</td>
<td>45</td>
</tr>
<tr>
<td>2014</td>
<td>302</td>
<td>62</td>
</tr>
<tr>
<td>2015</td>
<td>2</td>
<td>3</td>
</tr>
</tbody>
</table>
To protect the health and environment of all Kansans by promoting responsible choices.
LHDs Participating with KHI N (as of 8/24/2015)

Legend:  = Live
        = Testing

To protect the health and environment of all Kansans by promoting responsible choices.
Interoperability Roadmap
National Interoperability Roadmap

- Patchwork of state and federal laws
- Complex standards that are too flexible
  - Consolidated Clinical Document Architecture (C-CDA)
    - NIH study found wide interpretation
      - E.g. 12 different ways to represent a phone number
- Document vs. element sharing
  - Promotes the exchange of structured data

http://www.ncbi.nlm.nih.gov/pmc/articles/PMC4215060/
http://www.chilmarkresearch.com/2015/02/04/onc-catalyzing-a-national-interoperability-plan

To protect the health and environment of all Kansans by promoting responsible choices.
The Health IT Ecosystem as a Learning Health System


To protect the health and environment of all Kansans by promoting responsible choices.
An interoperable health IT ecosystem should support critical public health functions, such as real-time case reporting, disease surveillance and disaster response, as well as data aggregation for research and value-based payment that rewards higher quality care, rather than a higher quantity of care.

Questions?
Contact Information

Michael McPherson
785-296-1319
mmcperson@kdheks.gov
KanHIT.org
Acronyms

ARRA – American Recovery and Reinvestment Act
CAH – Critical Access Hospital
EE – Eligible Entity
EH – Eligible Hospital
EHR/EMR – Electronic Health/Medical Record
EP – Eligible Provider
HITECH - Health Information Technology for Economic and Clinical Health Act
HIE – Health Information Exchange
HIO – Health Information Organization
ONC - Office of the National Coordinator for Health Information Technology
KHIN – Kansas Health Information Network (khinonline.org)
LACIE – Lewis and Clark Information Exchange (lacie-hie.com)
KDHE – Kansas Department of Health & Environment (kdheks.gov & kanhit.org)
MU2 – Meaningful Use Stage 2
PHI – Personal Health Information
References

- IOM: *Crossing the Quality Chasm* - [http://www.nap.edu/catalog/10027.html](http://www.nap.edu/catalog/10027.html)
- KHIN – [http://www.khinonline.org](http://www.khinonline.org)
- SNOMED-CT - [http://browser.ihtsdotools.org/](http://browser.ihtsdotools.org/)
Backup Slides
## Stage 2 Meaningful Use
### Improve Population and Public Health

<table>
<thead>
<tr>
<th>Objective</th>
<th>Ambulatory Measure</th>
<th>Hospital measure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Immunization Registries</td>
<td>Ongoing Submission to Public Health Authority (Core)</td>
<td>Ongoing Submission to Public Health Authority (Core)</td>
</tr>
<tr>
<td>Reportable Lab Results (ELR)</td>
<td>N/A</td>
<td>Ongoing Submission to Public Health Authority (Core)</td>
</tr>
<tr>
<td>Syndromic Surveillance</td>
<td>Ongoing Submission to Public Health Authority (Menu)</td>
<td>Ongoing Submission to Public Health Authority (Core)</td>
</tr>
<tr>
<td>Cancer Registries</td>
<td>Ongoing Submission to Public Health Authority (Menu)</td>
<td>N/A</td>
</tr>
<tr>
<td>Specialized Registry</td>
<td>Ongoing Submission to Public Health Authority or National Specialty Society (Menu)</td>
<td>N/A</td>
</tr>
</tbody>
</table>
# MU2 Public Health Specifications

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Content Exchange Standard</th>
<th>Vocabulary Standard</th>
<th>Applicability</th>
<th>Core or Menu</th>
</tr>
</thead>
<tbody>
<tr>
<td>Immunization Registry</td>
<td>HL7 2.5.1 170.205(e)(3)</td>
<td>CVX</td>
<td>EP &amp; EH</td>
<td>Core for EH &amp; EP</td>
</tr>
<tr>
<td>Reportable Lab Results (ELR)</td>
<td>HL7 2.5.1 170.205(g)</td>
<td>SNOMED-CT &amp; LOINC</td>
<td>EH only</td>
<td>Core for EH</td>
</tr>
<tr>
<td>Syndromic Surveillance</td>
<td>HL7 2.5.1 170.205(d)(3)</td>
<td><em>Free-text: chief complaint</em></td>
<td>EP &amp; EH</td>
<td>Core for EH Menu for EP</td>
</tr>
<tr>
<td>Cancer Registries</td>
<td>CDA 170.205(i)</td>
<td>SNOMED-CT &amp; LOINC</td>
<td>EP only</td>
<td>Menu for EP</td>
</tr>
<tr>
<td>Infectious Disease Registry (Specialized Registry)</td>
<td>HL7 2.5.1</td>
<td>ICD9 &amp; ICD10</td>
<td>EP only</td>
<td>Menu for EP</td>
</tr>
</tbody>
</table>